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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,933	01/30/2004	Gregor Eschenbruch	32368-197830	3969
26694	7590	08/05/2004	EXAMINER	
VENABLE, BAETJER, HOWARD AND CIVILETTI, LLP P.O. BOX 34385 WASHINGTON, DC 20043-9998			WELCH, GARY L	
			ART UNIT	PAPER NUMBER
			3765	

DATE MAILED: 08/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/766,933	Applicant(s) ESCHENBRUCH ET AL	
	Examiner Gary L. Welch	Art Unit 3765	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 16-20 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>01302004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-13 and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leder et al. (U.S. 6,345,417) in view of Whitehurst (U.S. 3,657,773) and Riethmann (UK Patent 898,078).

Leder et al. discloses an endless circulating conveying device (Figure 4b). The conveying device strengthens a fiber lap as the fiber lap is compressed and condensed therein. The device comprises first and second converging rollers (11, 12) having an outer surface that conveys the fiber lap to further downstream processing. The rollers (11, 12) also subject the fiber lap to a pressure force 20 as the fiber lap passes through a gap between the rollers (11, 12) and thereby also strengthens the fiber web. The rollers (11, 12) are also known as "calendar rollers".

However, Leder et al. does not disclose that at least one of the rollers (11, 12) is provided with a profile surface that is non-continuous in an axial direction of the first roller.

Whitehurst teaches a fiber-processing machine having a pair of profiled calendar rolls (102, 103). The profile or flutes of the calendar rolls (102, 103) enables the

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rolls to intermesh with each other and with the fiber lap. It is noted that Whitehurst is silent with respect to why a profiled calender roller is better than a smooth calender roll. It is obvious to one of ordinary skill in the fiber processing art that the fluted or profiled rollers will perform a compression and condensing of the fiber lap due to the "intermeshing" of the rolls which will result in a stronger fiber lap. It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the smooth rolls of Leder et al. with the profiled calendar rolls of Whitehurst in order to strengthen a fiber lap running therebetween due to the "intermeshing" of the fiber lap between the calendar rolls.

Riethmann teaches a non-woven fabric having areas of high compressed localized areas 1 that are non-continuous in an axial direction (Figures 1 and 2). While not specifically stated, it is obvious that the non-woven fabric has been processed with rollers having non-continuous protrusions or profiled elements along its axial surface for making the high compressed localized areas. This configuration enables the non-woven fabric to be used in skin care because only small portions of the fabric are compressed while leaving the majority of the fabric uncompressed and therefore soft to the touch which is desired for skin care (Col. 1, line 41-Col. 2, line 54).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the profiled elements of Whitehurst with non-continuous profiled elements as taught by Riethmann so as to manufacture non-

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woven fabric to be used in skin care because only small portions of the fabric are compressed while leaving the majority of the fabric uncompressed and therefore soft to the touch which is desired for skin care (Col. 1, line 41-Col. 2, line 54).

With regard to claim 2, the pressure exerted by the profile elements of the first roller 12 is effective toward the second roller 11.

With regard to claim 3, the pressure exerted by the profile elements of the first roller 12 is effective toward the profile elements of the second roller 11.

With regard to claim 4, the profile elements press locally onto the fiber lap.

With regard to claim 5, a gap (d; Figure 4b) exists between the outer circumferences of the profile elements of the two rollers.

With regard to claim 6, the rollers rotate in opposite directions (Figure 4b).

With regard to claim 7, an urging member 20 applies a force to the first roller 12 wherein the force is directed toward the second roller 11.

With regard to claim 8, as stated in the rejection to claim 1, Leder et al. disclose smooth calendar rollers. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a smooth calendar roll and a profiled calendar roll as taught by Whitehurst in order to perform a desired predetermined level of strengthening to the fiber lap. Also, it is obvious that fewer fibers would be loss when providing only one profiled roller since the fibers would not be retained on the smooth surface of one of the calendar rolls.

With regard to claim 9, the width of the rollers exceeds the width of the fiber lap.

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With regard to claims 10-12, the applicant's specification appears silent with respect to the criticality of the shape of the profiled elements. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a round, tapered conical or square cross-section profile element in order to provide a predetermined level of strengthening and intermeshing of the fiber lap. Furthermore, Riethmann teaches non-woven fabric having square, rectangular, triangular, round and trapezoidal non-continuous compressed areas (Col. 3, lines 17-26).

With regard to claim 13, the profile elements are rounded at their ends.

With regard to claim 15, the fiber lap runs through two withdrawing rollers wherein the first and second rollers are located downstream in the direction of fiber lap movement from the withdrawing rollers.

With regard to claim 16, two withdrawing rollers (7, 8) are provided upstream of the converging rollers (11, 12).

With regard to claim 17, a lap-gathering element 10 is provided upstream from the first and second rollers (11, 12) and it has a rectangular cross-section discharge region (Figure 3).

With regard to claim 18, a ratio between the length (a) and the width (b) of the discharge region is at least 5:1. $a=20-100$ mm and $b=2-3$ mm.

With regard to claim 19, the profile elements are non-continuous in a circumferential direction of the first roller.

With regard to claim 20, a carding machine CM is provided upstream of the conveying device.

Allowable Subject Matter

3. Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

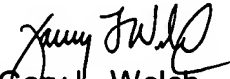
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary L. Welch whose telephone number is (703) 305-0451. The examiner can normally be reached on Mon-Fri 5:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John J. Calvert can be reached on (703) 305-1025. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Gary L. Welch
Primary Examiner
Art Unit 3765

glw